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Student's perceptions on choosing CAD software

Abstract

AutoCAD skills are often an obstacle for college graduates when entering the world of work. This research was carried out to see the perceptions of D3 Mechanical Engineering FT UNP students regarding AutoCAD. This research is descriptive research, with a total sampling method of 40 D3 Engineering FT UNP students who have taken CAD/CAM courses on 27 May 2024 – 27 June 2024. The data used in this research is Primary Data taken by distributing Google Forms. The research results show that in general student perceptions are at a fairly good level (70%). If we look at each indicator, in the Usage indicator, student perceptions are at the Fairly Good level (73%). In the Usability indicator, student perceptions are at a very good level (93%). In the Satisfaction indicator, student perceptions are at a very good level (93%). In the Constraints indicator, student perceptions are at a bad level (45%). In terms of preference indicators, student perceptions are at a very good level (90%).

Introduction

The learning and teaching process in CAD / CAM courses that is not optimal, of course, will have an effect, the inability and or inability of students to master computer applications as a means of making drawings. In other words, CAD / CAM as one of the mainstay weapons of D3 Mechanical Engineering graduates in the 4.0 era, must be maximised.

After entering the industrial world, several conditions were found where students who had graduated did not master AutoCAD as they should. This requires students to re-learn the use of AutoCAD. So a special moment is needed again for students to learn to use AutoCAD. This is clearly less effective in terms of study time.

On the other hand, at the beginning of the lecture and or during the study period, students do not take the time to find useful information about the skills that must be mastered after graduation. It is also possible that the teaching staff did not or did not convey the important function of AutoCAD teaching materials in the PBM process.

Methods

This research was conducted at the Department of Mechanical Engineering FT UNP on D3 Mechanical Engineering students who have taken CAD / CAM courses. With descriptive method. Using a total sampling pattern on 38 students.

By using a Likert scale, the variables to be measured are translated into dimensions, the dimensions are translated into sub variables, then the sub variables are further translated into measurable indicators which can be used as a starting point for making instrument items in the form of questions that need to be answered by respondents in the form of answers (questions) in the form of Strongly Agree (SS), Agree (S), Disagree (KS), Disagree (TS), and Strongly Disagree (STS). The answer to each questionnaire question consists of five categories and the statements are positive and negative. It is positive if the question

supports the object being measured, it is negative if the statement does not support the object being measured.

Finding and discussion
Finding

based on a questionnaire that has been distributed to 38 respondents, the results are as shown in table 1.

Table 1. variables data

State of the Variable	New students
Respondents	38
Mean	175,615
Median	177
Mode	177
Standard Deviation	6,900
Maximum	182
Minimum	152
Sum	6849

Table 1 shows that the answers given by 38 respondents. Where the answer scores are spread between 152 (minimum score) and 182 (maximum score). Furthermore, the mean (average) 175.514, median (middle score) 177, mode (score that often appears) 176 and standard deviation (standard deviation) 7.058 were obtained.

Tabel 2. frequency distribution

No	Indicators	Alternative Answer					N	Score
		SA	A	DL	D	SD		
1	Usage of	166	58	4	0	0	228	1074
2	Usability	318	23	1	0	0	342	1685
3	Satisfaction	176	14	0	0	0	190	936
4	Constraints	12	115	74	49	16	266	856
5	Preference	205	20	3	0	0	228	1114
	SUM	877	230	82	49	16	1254	5665
	percentage	70%	18%	7%	4%	1%	100%	

Based on the table and diagram above, it can be seen that the perception of D3 Mechanical Engineering FT UNP students, towards AutoCAD is in the Good Enough range (70%). However, judging from this achievement, it is necessary to have an active role from related elements to improve the quality of PBM specifically for CAD / CAM courses. So that it is possible to increase student perceptions in the future.

Discussion

In general, the results of this study illustrate that the perception of D3 Mechanical Engineering FT UNP students regarding AutoCAD is quite good. When viewed in the indicator section. The perception value is obtained as shown in table 3 below.

Table 3. percentage

No	Indicators	Alternative Answer				
		SA	A	DL	D	SD
1	Usage of	73%	25%	2%	0%	0%
2	Usability	93%	7%	0%	0%	0%
3	Satisfaction	93%	7%	0%	0%	0%
4	Constraints	5%	43%	28%	18%	6%
5	Preference	90%	9%	1%	0%	0%

With 73% agreeing to use the CAD software and 93% recognising its usefulness and satisfaction and only 5% recognising that they have problems in using this software, students' perception of this software is quite good.

Conclusion

From this research it can be concluded that the perception of D3 Mechanical Engineering FT UNP students is still at a fairly good level. This of course requires better study and analysis, in order to improve these perceptions. So that with an increased perception, it will have an influence on increasing the skill capacity of the students themselves.

Acknowledgement

Declaration
Author contribution

Indra Wita as a researcher and data collector for the facility relationship. Drs. Irzal, M.Kes. is a provider of direction and methods in research; Dr. Eko Indrawan, S.T., M.Pd. Evaluating research methods and data analysis, Dr. Junil Adri, S.Pd., M.Pd.T. and Primawati, S.Si., M.Si. evaluating Background of the Problem.

Funding statement

Conflict interest

The author states that there was no conflict when conducting the research.

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